

Documentation for ADTRAN Access & Aggregation products is available for viewing and download directly from the ADTRAN Support Community website.

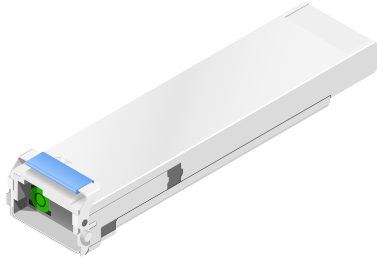
Go to: <https://supportforums.adtran.com/welcome>

Registration is required.

ADTRAN offers training courses on our products, including customized training and courses taught at our facilities or at customer sites.

For inquiries, go to: <http://adtran.com/training>

The following related online documents and resources provide additional information for this product: ADTRAN Pluggable Optics Compatibility Matrix (online tool: <http://www.adtran.com/sfp>)



NOTE

Due to compliance certification requirements, only XFP modules supplied by ADTRAN are to be used with the host module. ADTRAN cannot certify system integrity with other XFPs.

INSTALLATION

Before installing the equipment, inspect the XFP. If damage has occurred during shipping, file a claim with the carrier, and then contact ADTRAN Customer Support. For more information, refer to the warranty.

To install the XFP into an appropriate module, complete the following steps:

NOTE

Do not remove the protective end cap from the XFP until you are ready to connect the fiber optic cable.

1. Insert the XFP into the XFP cage on the module. Ensuring that the latch handle on the XFP is facing outward, slide the XFP all the way into the XFP cage until there is an audible "click".

NOTE

The latch on the XFP is for removal only. When removing the XFP, rotate the latch away from the XFP, the XFP should easily slide out of the cage.

2. Do not remove the protective end cap until the optical fiber connection is made.

NOTICE

ADTRAN recommends that you keep the protective end cap on whenever the transceiver optical fiber connector is not inserted.

Continue the installation and turn-up of the host module using the instructions in the Job Aid or Quick Start provided with the module or other system-level documentation available online at www.adtran.com.

DESCRIPTION

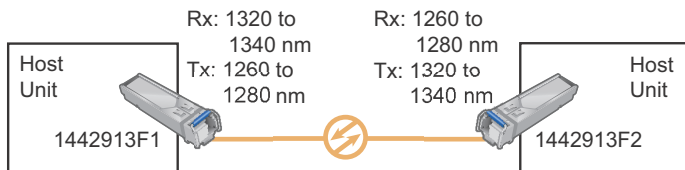
The XFP, 11.3 Gbps, BIDI, 60 km module (XFP, P/N: 1442913F1) provides bidirectional serial optical data communications up to 60 km when paired with its counterpart, XFP, 11.3 Gbps, BIDI, 60 km module (P/N: 1442913F2). The XFP plugs into ADTRAN equipment designed to accept Extended Form-factor Pluggables (XFPs). Installed into an appropriate host unit, the XFP provides a 10 Gbps optical interface to the supporting system.

CAUTION

Maintain a minimum attenuation for 60 KM modules to ensure safe operation of the device pair. The TX power can be more than the RX sensitivity for 60 KM modules.

NOTE

- The 1442913F1 and 1442913F2 must be deployed as pairs at each end of the network. The 1442913F1 must be connected to the 1442913F2 at the other end of the fiber.



- To ensure compatibility, refer to the documentation provided with the host module.

The following features are supported on the XFP:

- 9.95 - 11.3 Gbps, single-fiber operation
- 60 km maximum optical span

SPECIFICATIONS

General

- Power: Less than 2.0 W
- Optical Connectors: LC
- Data Rate: 9.95 to 11.3 Gbps
- Optical Span: 60 km

Optical

- Transmitter
 - ◆ TX Wavelength: 1320 to 1340 nm
 - ◆ Optical Transmit Level: 0 dBm to +5.0 dBm
 - ◆ Spectral Width: 1 nm maximum (-20.0 dB Spectral Width)
 - ◆ Extinction Ratio: 4.5 dB minimum
 - ◆ SMSR: 30 dB minimum
 - ◆ Power Penalty: 1 dB
 - ◆ Optical Budget: 21 dB
 - ◆ Minimum Span Attenuation: 15 dB
- Receiver
 - ◆ RX Wavelength: 1260 to 1280 nm
 - ◆ Optical Receive Level: -22.0 dBm to -7.0 dBm

Environmental

- **Protected Equipment Severe Environment (Outside)**
 - ◆ Operational Temperature Range: -40°C to +70°C
 - Case temperature hardened range: -40°C to +85°C
 - ◆ Storage Temperature Range: -40°C to +85°C
 - ◆ Relative humidity 5 to 95%

SAFETY AND REGULATORY

ENGLISH

WARNING

Read all warnings and cautions before installing or servicing this equipment.

CAUTION

This product uses a Class 1 Laser module that complies with 21 CFR 1040.10 and 1040.11 and IEC 60825-1, IEC 60825-2, EN 60825-1 and EN 60825-2.

CAUTION

- Electrostatic Discharge (ESD) can damage electronic modules. When handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.
- This product and host system are designed and intended for installation as part of either a Common Bonding Network (CBN) or Isolated Bonding Network (IBN).

- Per GR-1089-CORE Section 9, this product does not have an internal DC connection between battery return and frame ground. This product can be installed in a DC-I (isolated) or DC-C (common) configuration. For installations where other cards or the host system have internal connections between battery return and frame ground, the system would be intended for deployment only in a DC-C installation.
- The chassis frame ground terminal must be connected to an earth ground to ensure that the metal enclosure of the SFP is properly grounded via the backplane connector.

NOTE

- The Gigabit Ethernet port(s) are optical and therefore are not classified as any type of port as defined in Appendix B of GR-1089-CORE.
- This XFP is compliant with SFF-8472 *Digital Diagnostics Monitoring Interface for Optical Transceivers*, Revision 9.3
- This product is compliant with the SFP Multi-Source Agreement (MSA).
- This product is designed to be deployed in GR-3108-CORE environmental class 1, 2, and 3 as defined in GR-3108-CORE.
- This product meets or exceeds all the applicable requirements of NEBS, Telcordia GR-63-CORE, GR-1089-CORE, and ETSI EN 300368. This product is intended for deployment in Central Office type facilities, EEEs, EECs, and locations where the NEC applies (for example, Customer Premises).
- This product is to be installed in ADTRAN products in Restricted Access Locations only, and installed by trained service personnel.
- This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
 1. This device may not cause harmful interference
 2. This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by ADTRAN could void the user's authority to operate this equipment.
- This product is designed to meet the following environmental classes:
 - ◆ ETSI EN 300 019-1-1 "Classification of environmental conditions; Storage," Class 1.2
 - ◆ ETSI EN 300 019-1-2 "Classification of environmental conditions; Transportation," Class 2.3
 - ◆ ETSI EN 300 019-1-3 "Classification of environmental conditions; Stationary use at weather-protected locations," Class 3.3
- The equipment is designed to function without degradation during exposure to all test severities per Class 3.3 of ETSI EN 300 019-1-3.
- This product complies with ETSI EN 300 386 Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electromagnetic Compatibility (EMC) requirements.
- The XFP meets EU RoHS Directive. Refer to www.adtran.com for further information on RoHS/WEEE.

FRANÇAIS

⚠️ AVERTISSEMENT

Lisez tous les avertissements et mises en garde avant l'installation de cet équipement ou la réalisation de toute opération de maintenance.

⚠️ ATTENTION

Ce produit est un laser de classe 1 conforme à la norme FDA 21 CFR 1040.10 et 1040.11 et IEC 60825-1. Le produit est NRTL et CB certifiée à toutes les normes de sûreté américaines et européennes.

⚠️ CAUTION

- Une L'ESD (décharge électrostatique) peut endommager les modules électroniques. Lors de la manipulation des modules, portez un bracelet de décharge antistatique pour éviter d'endommager les composants électroniques. Placez les modules dans un emballage antistatique lors du transport ou du stockage. Lorsque vous travaillez sur les modules, placez-les toujours sur un tapis antistatique certifié muni d'un branchement de mise à la terre.
- Ce produit et système hôte sont conçus et destinés à être installés dans le cadre soit d'un réseau commun Bonding (CBN) ou isolé Réseau Bonding (IBN).
- Ce produit ne dispose pas d'une connexion c.c. interne entre le courant de retour de la batterie et la masse du châssis. Ce produit peut être installé en configuration c.c.-I (isolé) ou c.c.-C (commun). Pour les installations où d'autres cartes ou le système hôte ont des connexions internes entre le retour de la batterie et la masse du châssis, le système ne peut être déployé que dans une configuration c.c.-C.
- La borne de mise à la terre du châssis doit être branchée à une prise de terre afin d'assurer que le boîtier métallique de la SFP est correctement mis à la terre grâce au connecteur de face arrière.

Ce produit est conforme à la directive européenne RoHS. Reportez-vous à www.adtran.com pour de plus amples renseignements sur RoHS/WEEE.

DEUTSCH

⚠️ WARNUNG

Lesen Sie sich alle Warn- und Sicherheitshinweise durch, bevor Sie dieses Gerät installieren oder warten.

⚠️ VORSICHT

Dieses Produkt ist ein Klasse 1 Laser, die mit FDA 21 CFR 1040.10 und 1040.11 und IEC 60825-1 entspricht. Das Produkt ist NRTL gelistet und CB Certified allen geltenden amerikanischen und europäischen Sicherheitsnormen.

⚠️ CAUTION

- Elektrostatische Entladung können elektronische Module beschädigen. Tragen Sie beim Umgang mit Modulen ein Erdungsarmband, um Schäden an den elektronischen Komponenten zu vermeiden. Transportieren oder lagern Sie Module in antistatischem Verpackungsmaterial. Bei der Arbeit an den Modulen, achten Sie darauf, diese stets auf antistatische, elektrisch geerdete Matten zu legen.
- Dieses Produkt und Host-System sind so konzipiert und für die Installation als Teil entweder eine gemeinsame Bonding Network (CBN) oder isoliert Bonding Network (IBN) vorgesehen.
- Dieses Produkt hat keinen internen Gleichstromanschluss zwischen Batterierücknahme und Gehäusemasse. Dieses Produkt kann in einer DC-I (isoliert) oder DC-C (emeinsam) Konfiguration installiert werden. Bei Installationen, bei denen andere Karten oder das Host -System interne Verbindungen zwischen der Batterierückleitung und der Gehäusemasse haben, würde das System nur für den Einsatz in einer DC-C-Konfiguration eingesetzt werden.
- Die Erdungsschiene des Rahmens muss an eine Bodenstation angeschlossen werden, um sicherzustellen, dass das Metallgehäuse des SFP vorschriftsmäßig über den Rückwandanschluss geerdet ist.

Dieses Produkt erfüllt die EU RoHS Richtlinie. Bitte besuchen Sie www.adtran.com für ausführlichere Informationen zu RoHS/WEEE.



Warranty: ADTRAN will replace or repair this product within the warranty period if it does not meet its published specifications or fails while in service. Warranty information can be found online at www.adtran.com/warranty.

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CAUTION!
SUBJECT TO ELECTROSTATIC DAMAGE
OR DECREASE IN RELIABILITY.
HANDLING PRECAUTIONS REQUIRED.

ADTRAN CUSTOMER CARE:
From within the U.S. 1.888.423.8726
From outside the U.S. +1 256.963.8716
PRICING AND AVAILABILITY 1.800.827.0807

